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## TONER REPLENISHING DEVICE

### TONER REPLENISHING DEVICE

Patent Number: JP60243681  
Publication date: 1985-12-03  
Inventor(s): MIYA SHIGEYUKI; others: 02  
Applicant(s): MATSUSHITA DENKI SANGYO KK  
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Equivalents: JP1968472C, JP6079184B

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#### Abstract

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**PURPOSE:** To execute exactly the replenishment of a toner by one-touch, by interlocking an opening and closing cover of a toner hopper and a rotary member, operating the opening and closing cover in a state fitting a projection of a hollow vessel to the rotary member, and rotating the hollow vessel.

**CONSTITUTION:** A toner stirring member 15 constituted of a spring, etc. is installed to the lower part of a toner feed opening 13, several toner replenishing rollers 16 consisting of a magnetic material are arranged in the bottom of a toner hopper 10, a gap 17 is provided between the toner replenishing roller 16 and a housing 11, and a scraping plate 18 is installed to the opposite side of the gap 17. A rotary member 20 on which a notch 19 to be fitted to a projection 6 of a hollow vessel 6 is formed, a stopper 21 for controlling its rotational range, and an opening and closing cover 22 which can be opened and closed in the direction as indicated with arrows (a), (b) on the uppermost part of the toner hopper are installed to the upper part of the toner feed opening 13, and this cover and the rotary member 20 are connected by a link 23. In this way, the rotary member 20 is interlocked and rotated by rotating the opening and closing cover 22, and an opening 2 of the hollow vessel 1 fitted to the notch 19 is constituted so that its direction is changed upward and downward.

ール材3を剥がし開閉蓋22を閉じると、リンク23で連結された回転部材20が回転し、それに伴って中空容器1の開口2が下向きになり、開閉蓋22が閉じた時、トナー補給口13に対向し、中空容器1内のトナー24はトナーホッパー10内に補給される。また、中空容器1の交換時には開閉蓋22を開け、中空容器1の一端に付いているツマミ9が常時トナーホッパー10の上部を向いているのでこれを引き上げる。

#### 発明の効果

以上のように本発明によれば、トナー補給装置の構造が簡単で、かつトナー補給がワンタッチで確実に行なえ、さらに作業者の手等を汚したり周囲にトナーを飛散させることなくトナー補給操作が行なえるという非常にすぐれた効果が得られる。

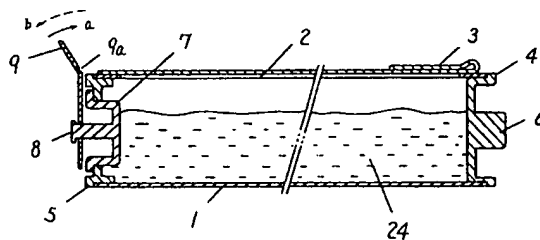
#### 4、図面の簡単な説明

第1図は本発明で使用する中空容器の一例の断面図、第2図は本発明の一実施例に係るトナー補給装置の断面図、第3図は同本発明の実施例の一部切欠斜視図である。

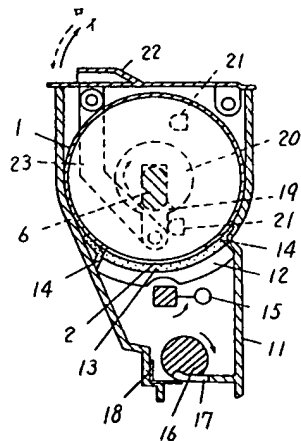
1……中空容器、2……開口、3……シール材、4……フランジ、5……フランジ、6……突起、7……キャップ、8……突部、9……ツマミ、10……トナーホッパー、11……筐体、12……支持部、13……トナー供給開口、14……トナーシール材、15……トナー攪拌部材、16……トナー補給ローラ、17……ギャップ、18……掻取り板、19……切欠き、20……回転部材、21……ストッパー、22……開閉蓋、23……リンク、24……トナー。

代理人の氏名 弁理士 中 尾 敏 男 ほか1名

第 1 図



第 2 図



第 3 図

